

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method of driving a liquid crystal panel having pixels arranged at each intersection between gate lines and data lines in a matrix type in an inversion system, comprising the steps of:

setting at least one pixel block each of which includes at least two data lines within the liquid crystal panel;

allowing adjacent pixels in a gate line direction within the at least one pixel block to respond to data signals having the same polarity; and

allowing each of the pixels outside the at least one pixel block to respond to data signals having a polarity contrary to pixels adjacently arranged at left and right sides thereof.

2. (Original) The method as claimed in claim 1, wherein the pixel block is positioned at a boundary portion between column drivers.

3. (Original) The method as claimed in claim 1, wherein the pixel block includes at least two data lines to which a data is applied from the same column driver.

4. (Original) The method as claimed in claim 1, wherein all the pixels within the liquid crystal panel responds to the data signals having a polarity inverted every frame.

5. (Currently Amended) An apparatus for driving a liquid crystal panel having pixels arranged at each intersection between gate lines and data lines in a matrix type in an inversion system, comprising:

first signal supplying means for setting at least one pixel block each of which includes at least two data lines within the liquid crystal panel to apply data signals having the same polarity to adjacent pixels in a gate line direction within the at least one pixel block; and

second signal supplying means for applying data signals to pixels outside the at least one pixel block, wherein the applied data signals have a polarity contrary to data signals applied to each of the pixels adjacently arranged at left and right sides thereof and also arranged outside the at least one pixel block.

6. (Original) The apparatus as claimed in claim 5, further comprising:
line-inversion control means for controlling the first signal supplying means to apply the data signals having the same polarity to the adjacent pixels in the gate line direction; and
dot-inversion control means for controlling the second signal supplying means to apply the data signals having a polarity contrary to the pixels at the left and right sides thereof.

7. (Original) The apparatus as claimed in claim 5, wherein the first and second signal supplying means comprises:

at least two signal inverters for responding to control signals applied from the line-inversion control means and the dot-inversion control means to invert phases of input data signals.

8. (Original) The apparatus as claimed in claim 7, wherein all of the odd-numbered signal inverters supplied with odd-numbered data signals and the even-numbered signal inverters supplied with even-numbered data signals respond to the control signal from the line-inversion control means to invert the input data signals.

9. (Original) The apparatus as claimed in claim 7, wherein any one of the odd-numbered signal inverters supplied with odd-numbered data signals and the even-numbered signal inverters supplied with even-numbered data signals respond to the control signal from the line-inversion control means to invert the input data signals.

10. (Previously Presented) The method as claimed in claim 2, wherein data lines within at least one first plurality of consecutively arranged data lines are connected to adjacent column drivers.

11. (Currently Amended) A method of driving a liquid crystal panel having gate lines, data lines crossing the gate lines, and pixels arranged in a matrix pattern at crossings of the gate and data lines, comprising:

applying video signals to at least one first plurality of consecutively arranged data lines such that video signals having the same polarity are applied to pixels adjacent each other along a gate line direction; and

applying video signals to at least one second plurality of consecutively arranged data lines such that video signals having opposite polarities are applied to each of the pixels adjacent each other along a gate line direction, wherein data lines within the at least one second plurality of consecutively arranged data lines are not included within the at least one first plurality of consecutively arranged data lines.

12. (Previously Presented) The method as claimed in claim 11, further comprising providing a plurality of column drivers for applying the video signals, wherein each column driver is connected to a plurality of consecutively arranged data lines.

13. (Previously Presented) The method as claimed in claim 12, wherein data lines within at least one first plurality of consecutively arranged data lines are connected to adjacent column drivers.

14. (Previously Presented) The method as claimed in claim 12, wherein at least one first plurality of consecutively arranged data lines is connected to a single column driver.

15. (Previously Presented) The method as claimed in claim 11, further comprising inverting polarities of video signals applied to all of the pixels within the liquid crystal panel every frame.

16. (Currently Amended) An apparatus for driving a liquid crystal panel having gate lines, data lines crossing the gate lines, and pixels arranged in a matrix pattern at crossings of the gate and data lines, comprising:

first signal supplying means for applying video signals to at least one first plurality of consecutively arranged data lines such that video signals having the same polarity are applied to pixels adjacent each other along a gate line direction; and

second signal supplying means for applying video signals to at least one second plurality of consecutively arranged data lines such that video signals having opposite polarities are applied to each of the pixels adjacent each other along a gate line direction, wherein data lines within the at least one second plurality of consecutively arranged data lines are not included within the at least one first plurality of consecutively arranged data lines.

17. (Previously Presented) The apparatus as claimed in claim 16, further comprising:
 - line-inversion control means for controlling the first signal supplying means to apply video signals having the same polarity to the pixels adjacent each other along the gate line direction; and
 - dot-inversion control means for controlling the second signal supplying means to apply video signals having opposite polarities to the adjacent each other along in the gate line direction.

18. (Previously Presented) The apparatus as claimed in claim 16, wherein the first and second signal supplying means comprises:

at least two consecutively arranged signal inverters for responding to control signals applicable from the line-inversion control means and the dot-inversion control means and for inverting phases of video signals.

19. (Previously Presented) The apparatus as claimed in claim 18, wherein all odd-numbered signal inverters, supplied with odd-numbered data signals, and even-numbered signal inverters, supplied with even-numbered data signals, respond to the control signals from the line-inversion control means to invert the video signals.

20. (Previously Presented) The apparatus as claimed in claim 18, wherein any one of odd-numbered signal inverters, supplied with odd-numbered data signals, and even-numbered signal inverters, supplied with even-numbered data signals, respond to the control signals from the line-inversion control means to invert the video signals.

21. (New) A liquid crystal display device have a plurality of gate lines crossing a plurality of data lines to define a plurality of pixels, comprising:

a plurality of data drivers; and

a plurality of blocks of adjacent data lines each associated with one of the plurality of data drivers;

wherein pixels along a gate line in each of the plurality of blocks of adjacent data lines are driven using a dot inversion method such that adjacent pixels along the gate line have opposite polarities; and

wherein pixels from at least two different blocks of adjacent data lines that are directly adjacent to one another along a gate line have the same polarity.